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Beef Cattle Breeds

Farmers' Bulletin No. 2228 • U.S. DEPARTMENT OF AGRICULTURE

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BEEF CATTLE BREEDS

Animal Husbandry Research Division, Agricultural Research Service, U.S. Department of Agriculture

SELECTING BEEF CATTLE BREEDS

The long-range success of a beef herd depends more on the genetic procedures and breeding practices followed by cattlemen than on the breed they select.

Unfortunately records are not available on productivity and carcass quality of representative cross sections of beef breeds. This makes it difficult to predict how most breeds will perform either as straightbreeds or in crosses with other breeds.

However, some tentative and general appraisals can be made, based on records from four types of programs:

1. Beef performance testing programs started in the 1950's by about 35 State Extension Services. These programs, often in cooperation with State breed organizations, are continuing.

2. Production records of beef cattle accumulated by Performance Registry International, an organization founded in 1955.

3. Performance and carcass evaluation programs conducted by most breed associations to aid their members in selecting superior cattle.

4. Numerous research programs conducted at State and Federal Experiment Stations.

Although it is impossible to determine whether cattle in these programs are representative of the breeds, the records appear to show that:

- Breed differences in pre- and post-weaning gain are relatively small among the three British breeds—Angus, Hereford, and Shorthorn—and the polled types of the latter two.

- The Charolais and the new breeds based on Brahman-European crossbred foundations grow faster, both before and after weaning, than the British breeds. (The same is true of crosses of these breeds with British breeds.)

- If breed differences exist in efficiency of growth (feed consumed per unit of gain), they have not been established. Similarly, breed differences in fertility and longevity have not been clearly defined in most cases.

- Among the British breeds, differences in meat palatability and tenderness are small.

● The Charolais and its crosses, the Brahman and its crosses, and new breeds based on Brahman-European crosses produce carcasses with less external fat and higher yields of trimmed preferred retail cuts than British breeds. As compared to British types slaughtered at the same weights, these crosses ordinarily do not have as much marbling and do not grade as high by USDA quality grade standards.

● Brahman cattle and breeds based on Brahman-European foundations have greater heat tolerance than European types and greater resistance to many insects and some diseases. As compared to British types, animals of these breeds are slower to reach sexual maturity, but brood cows are excellent mothers and have longer productive lives. The lean meat from the Brahman, and from breeds with part Brahman foundations, has been found in several experiments to be somewhat less tender than that of British breeds.

Some beef breeds are horned and some polled (hornless). Mutations (genetic changes) have occurred in certain animals of several horned breeds, causing them and their descendants to be polled. In some cases breeders developed these polled strains and established separate breeds. It is a moot question whether these types are truly different breeds, but for convenience they are discussed separately in this bulletin.

Selection of a polled or horned breed or type normally should be determined by personal preference. No objective information is available on comparative productivity of

the two types. Horned animals, once dehorned, are then physically comparable to naturally polled ones.

Polled or dehorned cattle feed together more quietly and need less space than horned cattle. There is also less danger of carcass damage to animals during shipment to market. For these reasons horned cattle destined for feedlot finishing should always be dehorned. Under most farming and many range conditions, hornless breeding cows are considered easier to handle. Heifers destined for use as brood cows generally should be dehorned.

Breeders choosing to raise horned animals frequently use weights on the horns of young animals. These weights train and shape the horns into more pleasing contours that eliminate some of the hazards associated with untrained horns.

Key Points in Breed Selection

Available information indicates:

1. All breeds have both strong and weak points.
2. No one breed is best for all important characteristics under all conditions.
3. Much hereditary variation exists in all breeds. Therefore, initial selection of superior animals and further improvement of the herd through use of good breeding practices are fully as important as deciding which breed to use.

Choosing a Breed

Consideration of the following will aid in making an objective choice of breed:

1. Survey the area to see what breed or breeds are the most produc-

tive in environments similar to that in which your herd will be kept.

2. Study market demand for animals of different breeds. Relate this to probable productivity in determining the breed likely to be most profitable. This is important whether one produces breeding animals, feeders, or finished slaughter stock.

3. Compare the advantages of a breed or breeds already produced in large numbers in your area with those of breeds having apparent usefulness, but not currently raised extensively, in the same area.

Foundation animals should be obtained from the best stocks availa-

ble at prices compatible with the type of production planned. Breeding practices should be followed that will improve the herd genetically. These practices are discussed in Agriculture Information Bulletin No. 286, "Beef Cattle Breeding," which can be obtained for 25 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Include your return address and ZIP Code. A number of breed associations also have excellent publications available upon request. See p. 27 for a list of associations with addresses.

DEVELOPMENT OF BEEF CATTLE BREEDS

The development of modern-day beef breeds began in the late 1700's in Europe, especially in the British Isles.

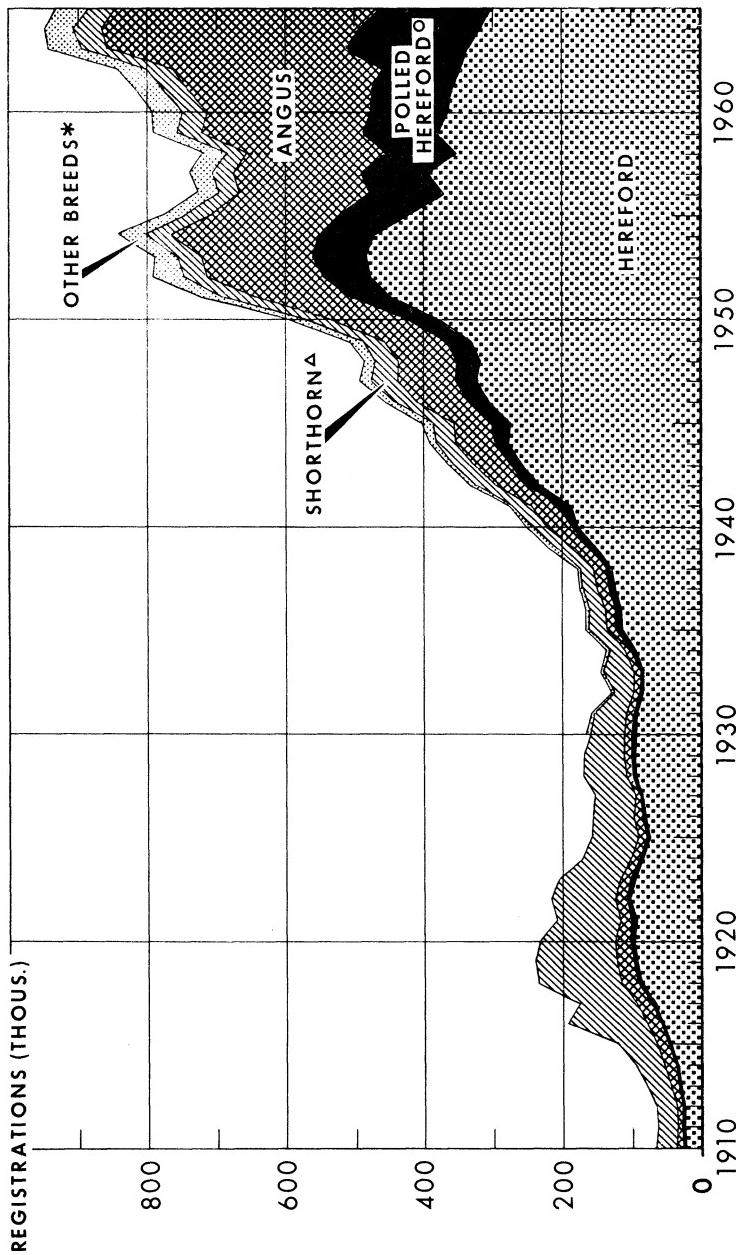
Farmers in an area selected cattle of a kind they considered best for the locality. They continued to grow them consistently over a period of years, and these selections often resulted in the formation of a breed. Some breeds resulted from crosses of existing breeds—others from crosses of cattle that had not attained breed status.

The most desirable animals tended to be gathered into a few herds that were bred by introducing little or no other stock. As they gained popularity, numbers increased and eventually a breed society was formed. In this way, highly useful and efficient kinds of animals were developed that survived as breeds.

Breed formation has been somewhat different in the United States

in the 20th century. The Brahman was formed by the amalgamation of several Zebu breeds or strains from India. In other cases, breeders identified crossbred types, either from their own experience or from experiment station results, that had desired combinations of traits not found in existing breeds. The crossbreds were then intermated and the offspring selected for desired performance traits, as well as for color and horn type in some cases.

The accompanying chart shows beef cattle registrations by breeds since 1910. These registration numbers are not perfectly related to commercial importance of the respective breeds, but they are the best indicators available. Some breeds register a higher proportion of females than other breeds. The percentage of purebred but unregistered bulls sold to commercial producers probably varies among breeds, too.



* BRAHMAN, CHAROLAIS, RED ANGUS, GALLOWAY, SCOTCH HIGHLAND, CHARBAY, SANTA GERTRUDIS, BEEFMASTER, BRANGUS AND RED BRANGUS.

△ INCLUDES POLLED SHORTHORN PRIOR TO 1934 ALSO INCLUDES MILKING SHORTHORN
PRIOR TO 1963. INCLUDES ONLY REGISTRATIONS BY AMERICAN POLLED HEREFORD ASSOCIATION. SOME OF THESE WERE REGISTERED ONLY IN THIS ASSOCIATION AND AN UNKNOWN NUMBER OF POLLED CATTLE WERE REGISTERED ONLY IN THE AMERICAN HEREFORD ASSOCIATION. THESE THUS APPEAR WITH THE HEREFORDS.

American beef cattle registrations.

BREEDS DEVELOPED IN THE BRITISH ISLES AND CONTINENTAL EUROPE

Angus

Characteristics of Angus cattle:

- Black, smooth hair coat.
- Polled.
- Generally alert and vigorous.

The Angus breed originated in Scotland from two local strains known as humlies and doddies. The breed developed in a rigorous climate on rolling to rough land not particularly fertile, except in the valleys.

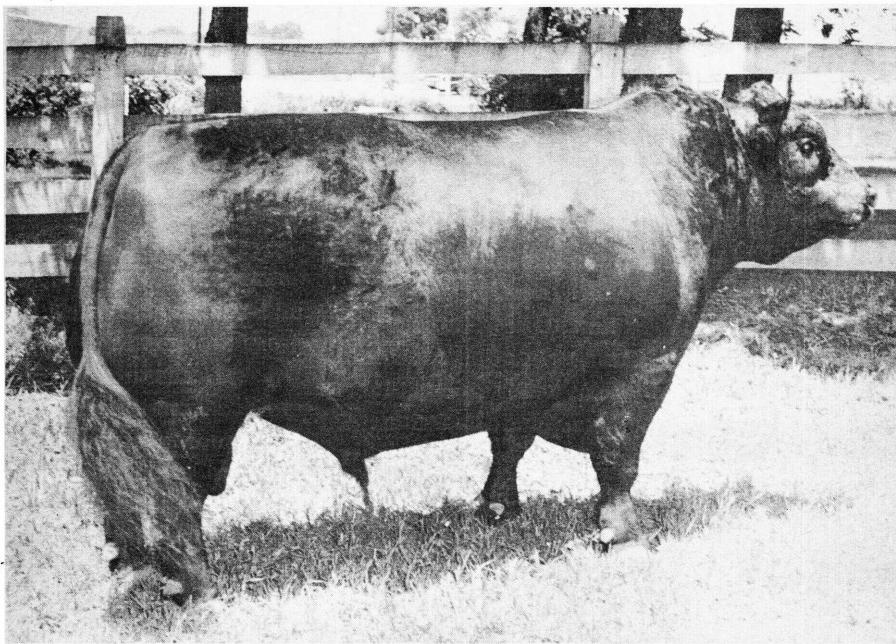
A retired London silk merchant, then living in Victoria, Kans., imported the first four Angus bulls into the United States in 1883 and crossed them with native Texas Longhorn cattle. The bulls adapted themselves well to range conditions and produced superior calves. More

cattle were soon imported from Scotland.

For many years the breed was considered best adapted to farming areas. Its popularity has increased greatly in the range areas, however, and today the breed is found in every State and in Canada. If Herefords and Polled Herefords are considered as separate breeds, the Angus has led all other breeds in total annual registrations since 1963.

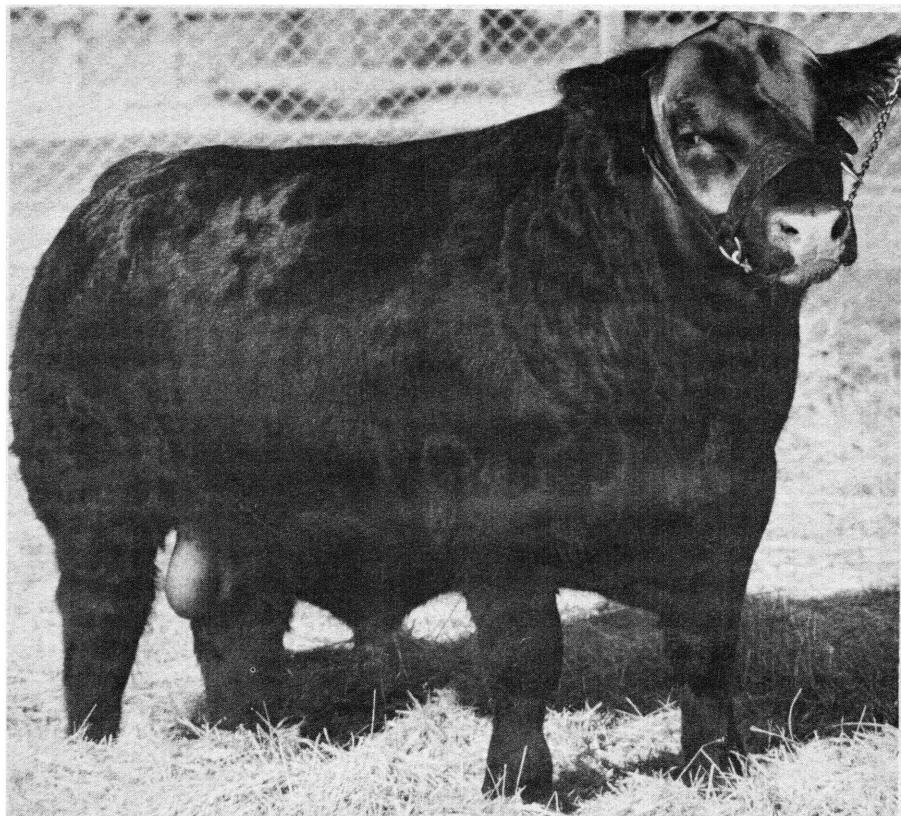
Angus cattle have an enviable record in the feedlot and as fat slaughter cattle because they mature early and produce carcasses of high-quality, well-marbled meat.

All, or nearly all, animals of the breed are pure for the dominant



Angus.

BN-30650



Red Angus.

BN-30651

polled gene. Thus, in crosses with horned breeds of European origin or type, the crossbred calves are nearly always polled.

Horn inheritance is more complicated in crosses with the Brahman. In Angus crosses with this breed, 95 percent or more of the heifer calves are polled; one-half to three-fourths of the bull calves will have some horn or scur.

More than 95 percent of Angus cattle are pure for a gene for black body color. In crosses with red-bodied breeds the offspring are black but may have white markings characteristic of the other

breed. In crosses with white Short-horns, so-called blue-grays are often produced with a mixture of white and black hair.

Calves produced from Angus crosses with Charolais (cream colored or creamy white) are usually dark or "smokey" white. Thus, the black of the Angus is only partially dominant in this cross.

Red Angus

Red is inherited as a simple one-gene recessive in Angus cattle. Individual red cattle have occurred in the breed since its earliest develop-

ment. This shows that the gene for red is present at low frequency in the breed. Although black has been the favored color since the founding of the breed, reds can be registered in the Angus herdbook in Scotland. Prior to 1917 they were also accepted for registry by the American Angus Association.

Because red is a recessive gene, the offspring of red x red matings are always red. Since about 1945 some breeders have taken advantage of this fact to establish true-breeding Red Angus herds. Breeders formed an association — the Red Angus Association of America, in Fort Worth, Tex., in 1954.

Except for color, the foundation animals of the breed were similar to black animals of the parent black

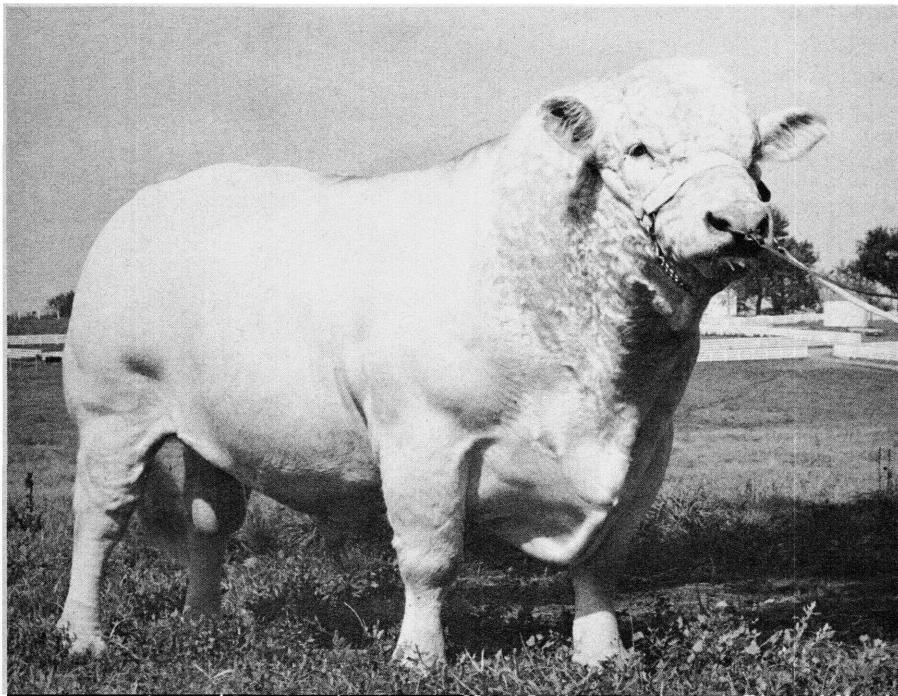
breed. Red color absorbs less of the sun's heat, which may be an advantage in hotter climates. The degree to which the Red Angus breed remains like the parent breed in features other than color will depend on future selection standards within the two breeds.

Charolais

Characteristics of Charolais cattle:

- Solid creamy to wheat coats.
- Horns similar in size and shape to those of the Shorthorn.
- Rugged muscular appearance.

The Charolais breed originated in France, where it is one of the most important beef breeds. The animals are thick and muscular. The light



B.N.-300652

Charolais.

creamy coat dominates partially to completely in crosses.

Only a small number of Charolais cattle have been imported into the United States. The first arrived in 1936 from Mexico. Numbers are being increased through topcrossing on other breeds.

In May 1966, the first new genetic source of Charolais—since the original importations into Mexico—became available on the North American continent. This was through the importation of live French Charolais animals into Canada and frozen Charolais semen released through quarantine testing at USDA's Station on Plum Island, N.Y. The Canadian importation involved 109 animals, 28 of which were bulls.

The American-International Charolais Association operates with an open herdbook and registers animals with five topcrosses. More than 200,00 females are recorded in this upgrading program.

Devon

Characteristics of Devon cattle:

- Rich deep red to pale chestnut coats. Most popular are "ruby red."
- Yellow skin.
- Creamy white, black-tipped, medium-size horns.

The Devon breed originated in Devonshire's grass-covered hills in southwestern England, a region famous for the high quality of its beef. Colonists brought Devon cattle to America as early as 1623, and for years "the old red cow" supplied the settlers milk, beef, ox teams, and leather.

A purebred hornless mutant is the

basis for the breed's strain of registered polled Devons dating back to 1915.

Devon breeders are urged to use artificial insemination and weight-for-age progeny performance records to improve their cattle. The Devon breed's registry office registers female progeny of registered Devon bulls and grade beef brood cows in its "Qualified Registry," provided they have growth records of at least 2 pounds per day of age.

In earlier years the Devon was sometimes used as a dual-purpose type, but for the past 20 years, emphasis and use has been as a beef breed.

Most of the Devon herds are in South Carolina, Louisiana, Mississippi, Oregon, Texas, and Maryland.

Galloway

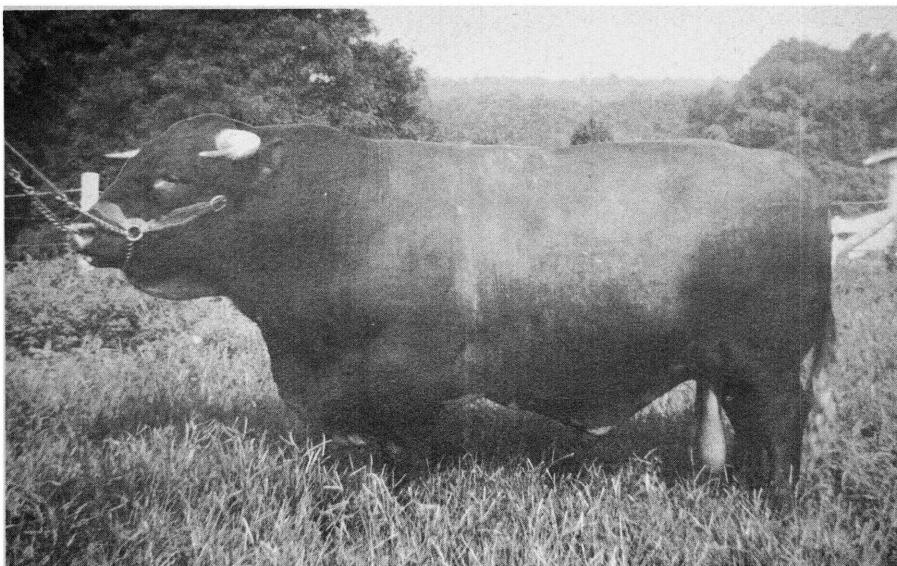
Characteristics of Galloway cattle:

- Black, long, soft wavy hair and thick, mossy undercoat.
- Polled.

The Galloway breed was developed in southwest Scotland where the climate is moist and chilly.

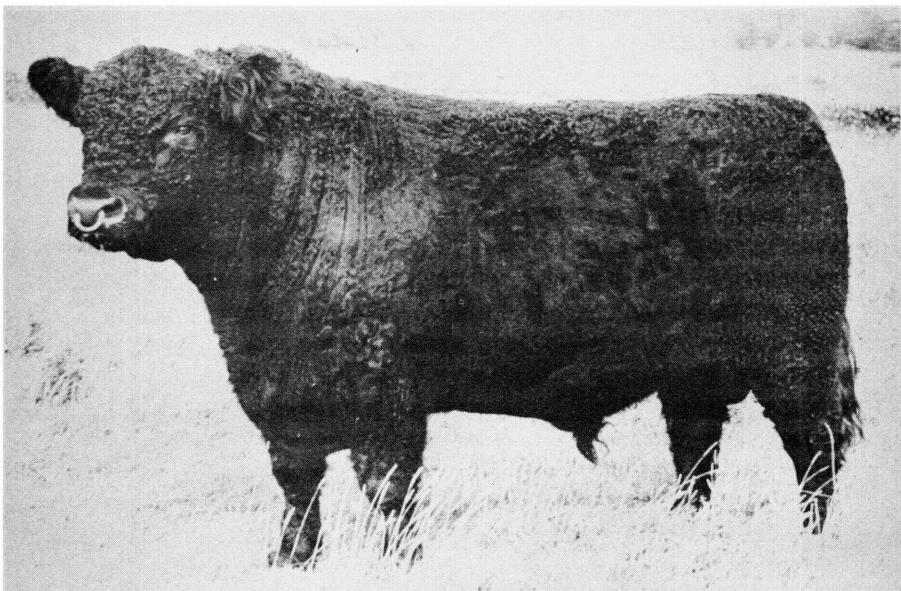
In general, the breed places great emphasis on hardiness, carcass quality, foraging ability, quick response to good feeding conditions, and on good coats, wide muzzles, and good feet and legs. The newborn calves are said to survive more severe weather conditions than those of most other breeds.

The breed was first imported into the United States in 1870. The number raised here has never been large but has been increasing in recent years.



BK-30653

Devon.



BK-30654

Galloway.



BN-30885

Hereford.

Hereford

It is an unsettled question whether all Herefords should be considered as one breed or whether the polled type should be considered a distinct breed. Since the polled type has its own association, it is considered a separate breed in this publication. Thus, the polled type is identified as such in the text and use of the word "Hereford" alone implies the horned type.

Characteristics of Hereford cattle:

- White faces and red bodies.
- Markings: white face, white crest, white legs below the hocks and knees, white dewlap, white underline and flanks, and white switch.
- Medium-size horns.
- Docile and easily handled.

The Hereford breed originated in the County of Hereford in England, where there is much fertile

valley and plains land. The land produces pastures and crops abundantly.

The statesman Henry Clay of Kentucky imported a few Herefords in 1817. However, the first Herefords important in establishing the breed in the United States arrived in 1840. They were purchased by two Albany, N.Y., breeders. Importations in large numbers began in the 1870's. The breed became very popular.

Herefords are generally regarded as having superior foraging ability, vigor, and hardiness. They are commonly thought to produce more calves under rigorous conditions than many other breeds. These characteristics are perhaps responsible for the breed's popularity in the western part of the United States.

The distinctive white face and other white patterns of the Here-

ford tend to be dominant in crosses with all other breeds. Modifying genes often reduce the amount of white in crosses as compared to purebreds, but in almost all cases, crosses can be clearly identified as having a Hereford parent. This distinctive color pattern may have been a factor in establishing the breed's popularity.

The American Hereford Cattle Breeders Association has registered more cattle since its organization in 1881 than any other American breed association. In 1934 the organization's name was shortened to the American Hereford Association.

Polled Hereford

Polled Herefords were developed by cattlemen who liked the Hereford breed but preferred polled cattle. Historically, attempts were made to develop "single-standard" Polled Herefords by introducing the polled gene from a polled breed.

These animals were not eligible for registry by the American Hereford Association and never became popular.

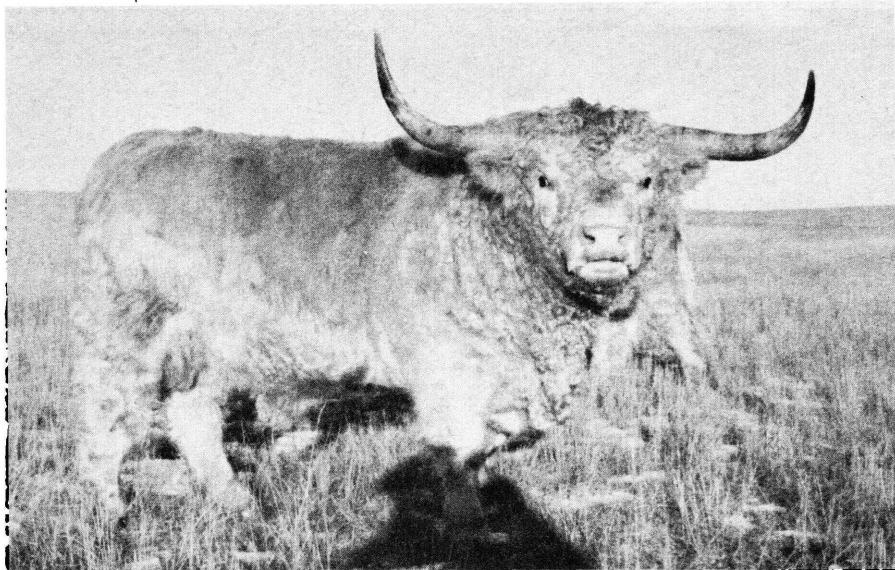
Present-day Polled Herefords are all "double-standard." That is, they descend from purebred horned Herefords and are similar to them except for the horn characteristics.

The Polled Hereford breed had its beginning in 1900 when Warren Gammon of Iowa checked with nearly every Hereford breeder in the United States for available, naturally occurring, purebred polled animals. The following year he purchased 10 polled females and 4 polled bulls. These polled individuals were the result of one or more natural changes, or mutations, to the dominant gene for polled. Subsequent mutants were also used in forming the breed. Crosses of horned Herefords with polled animals followed by selection of the polled descendants have been used to improve the polled type.



Polled Hereford.

BN-30444



BN-30467

Scotch Highland.

Mr. Gammon and others organized the American Polled Hereford Cattle Club in 1900. The club was combined with the National Polled Hereford Association in 1911 to form the American Polled Hereford Breeders Association.

Since 1901 over 2½ million Polled Herefords have been recorded, 68 percent of these since 1956.

Scotch Highland

Characteristics of Scotch Highland cattle:

- Long, coarse outer hair with a soft thick undercoat.
- Black, brindle, red and light red, dun yellow, and silver coats.

The Scotch Highland breed of cattle, developed in the Hebrides Islands near the west coast of Scotland, is one of the oldest European breeds. A small number of these animals have been imported into the

United States. The American Scotch Highland Breeders Association was organized in 1948.

Scotch Highland cattle are very hardy and exceptionally good foragers. They developed under rigorous climatic conditions and had scant feed supplies. Some ranchers in the northern plains of the United States cross Scotch Highland cattle with other breeds to infuse a greater winter hardiness in the offspring.

Shorthorns

Characteristics of Shorthorn cattle:

- Red, roan, and white in color (Spotted animals and animals with white legs are discriminated against.)
- Short horns that are refined and generally incurving.
- Generally of good temperament and easily handled.

The Shorthorn breed originated in the late 1700's in northeastern England, principally in the valley of the Tees River. This is a fertile area, and selection under good feed conditions may have contributed to the characteristics of modern Shorthorns.

The Coates Herd Book, established in 1822 to record pedigrees of Shorthorn cattle, was the first cattle herdbook. It served as a model for later herdbooks.

Shorthorns were bred originally for both meat and milk—dual-purpose animals. In earlier times the name "Durham" was often applied, but it is no longer used.

Shorthorns imported into the United States between 1820 and 1850 are responsible for establishing the breed on a permanent basis

in this country. Importations of this breed date back much farther, however, to as early as 1783.

In the middle 1800's a Scottish breeder, Amos Cruickshank, and others, selected intensely within the existing Shorthorn breed for animals having increased compactness and thickness and the ability to mature and fatten at early ages. In time, this resulted in separation of the breed into distinct beef and milking types.

Scottish Shorthorns did not attain popularity in the United States until the last 2 decades of the 19th century. Beef type Shorthorns in this country today trace almost entirely to Scottish cattle in all lines of their pedigrees.

Since Shorthorns vary in color, coat color inheritance is of interest.



Shorthorn.

BK-30658

With correct classification, mating red to red results in all red offspring; mating white to white gives all white offspring; mating red to white gives roan offspring; and intermating roans gives red, roan, and white calves in an average proportion of 1:2:1. Misclassification for color sometimes occurs because modifying genes affect the proportion of red and white hair in roan individuals. They can vary from almost red to almost white. This can lead to misclassification—as in classifying red a genetically roan individual with only a few white hairs. White markings on the underline, tail, and sometimes on the forehead, appear to be inherited independently of the basic color.

The proportions of different colored animals within the Shorthorn breed have not been studied in depth recently. However, an indication of the breakdown is seen in the 1965 anniversary issue of the *Shorthorn World*. It contains more than 600 pictures of Short-horn and Polled Shorthorn bulls.

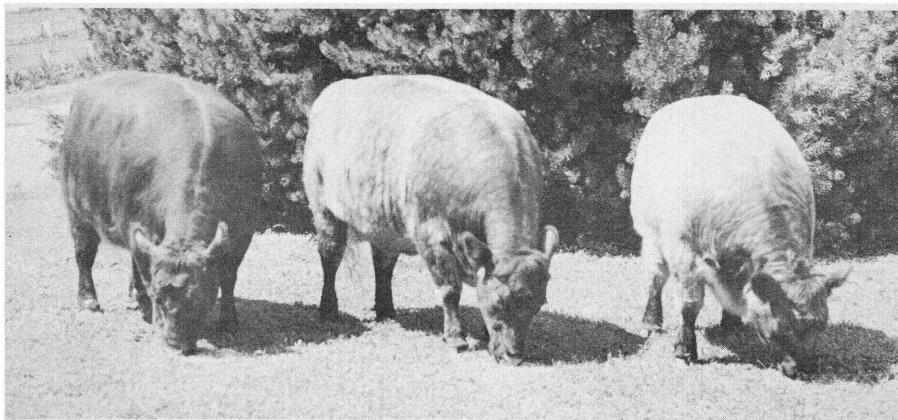
Although the pictures were in black and white, it could be determined that about 12 percent of the bulls were white, 15 percent roan, and 73 percent either red or very dark roan. Many of the latter animals showed some white markings. These percentages are at least an indicator of general preference for reds or dark roans—a preference that has existed for many years.

The term "Shorthorn" used without a qualifying word, refers to the horned, beef type animal.

Shorthorns are most popular in the Corn Belt and other areas where feed is plentiful and grazing conditions are good. They are now raised successfully in all parts of the country.

Both beef and dairy types are registered in the same herdbook in England and Scotland. This practice was followed in the United States until 1948, when the American Milking Shorthorn Society established its own herdbook.

The Milking Shorthorn breed is discussed under "Dual-Purpose Breeds," page 24.



BN-30450

Polled Shorthorn.

Polled Shorthorns

Except for horns, characteristics of Polled Shorthorns are the same as in horned Shorthorns.

In the late 1800's, polled cattle of predominantly Shorthorn breeding were developed by grading up to Shorthorns after crosses to native hornless, or "muley," cows. From 1890 to 1923, "single-standard" polled animals carrying a predominance of Shorthorn inheritance were eligible for registry. These cattle lost their popularity and have faded from the scene.

"Double-standard" Polled Short-horn cattle are registered in the same herdbook as horned beef Shorthorns because their ancestry comes from registered Shorthorns. They originated from the descendants of a mutant polled cow, Oakwood Gwynne 4th.

Polled Shorthorn breeders have used crosses with horned cattle to improve their breed while retaining the polled characteristic.

In recent years, about one-third of the Beef Shorthorn registrations have been of the polled type.

BREEDS DEVELOPED IN THE UNITED STATES

The development of beef breeds in the United States has all occurred in this century. The Brahman was developed by combining several breeds or strains of Zebu (*Bos indicus*) cattle of India. In all other cases, new breeds have been developed from Brahman-European crossbred foundations.

Brahman-European crossbreds have many production advantages, especially for conditions in the Southern United States. Maintaining a systematic crossbreeding system is difficult, especially in small herds. Most of the new breeds are based on Brahman-European crossbreds and have been developed with these objectives: (1) To create true-breeding types with the production advantages of the crossbreds, thus eliminating need for continuing crossbreeding; (2) to improve upon the crossbred type through selection for desired qualities not present in

the foundation crossbreeds. All animals in these breeds show some Brahman physical features, such as a small hump, large ears, and pendulous skin on the throat and navel areas.

Beefmaster

Characteristics of Beefmaster cattle:

- Color variable, with more reds and duns than other colors.
- Most are horned but polled individuals occur.

The development of the breed was begun in 1931 by Tom Lasater on a ranch near Falfurrias, Tex. The foundation herd of the breed was moved in 1949 to Matheson, Colo., where development continues.

Three breeds—the Hereford, the Shorthorn, and the Brahman—were combined to produce the Beefmaster. In the initial crosses, Mr. Lasater used both the registered



BW-30060

Beefmaster.

Hereford herd and the Brahman herd, which had been developed by his father, Edward G. Lasater, who began his work with Brahman cattle in 1908. The foundation herd has been closed since the purchase of a few registered Shorthorn sires during the 1930's.

The majority of the crossbreeding was carried on in multiple sire herds under range conditions; hence, the exact percentage of blood of each of the parent breeds is not known. It is estimated that about 25 percent Hereford, 25 percent Shorthorn, and 50 percent Brahman hereditary material was incorporated into the breed.

During the entire period of breed development, selection has been practiced for disposition, fertility, weight, conformation, hardiness, and milk production. No planned selection for coat color has ever been

made. However, there has been an apparent increase in the frequency of red.

Beefmaster Breeders Universal was organized in 1961 with headquarters in San Antonio, Tex. Universal recognizes as Beefmasters only cattle that are purebred descendants of the foundation herd (Lasater Beefmasters) or are produced by three consecutive top-crosses of recognized Beefmaster breeding. No distinction is made between artificial insemination and natural service.

In order that each Beefmaster may be permanently identified with the breeder, a prefix name such as "Jones Beefmasters," "Smith Beefmasters," etc., is used to designate his cattle. Thus, in a unique way, the responsibility for the continued improvement of the breed is placed squarely upon the individual breeder.

Brahman

Characteristics of Brahman cattle:

- Distinctive appearance, a hump over shoulders, loose skin (dewlap) under throat, and large drooping ears.
- Color light gray or red to almost black; prevailing color, light to medium gray.

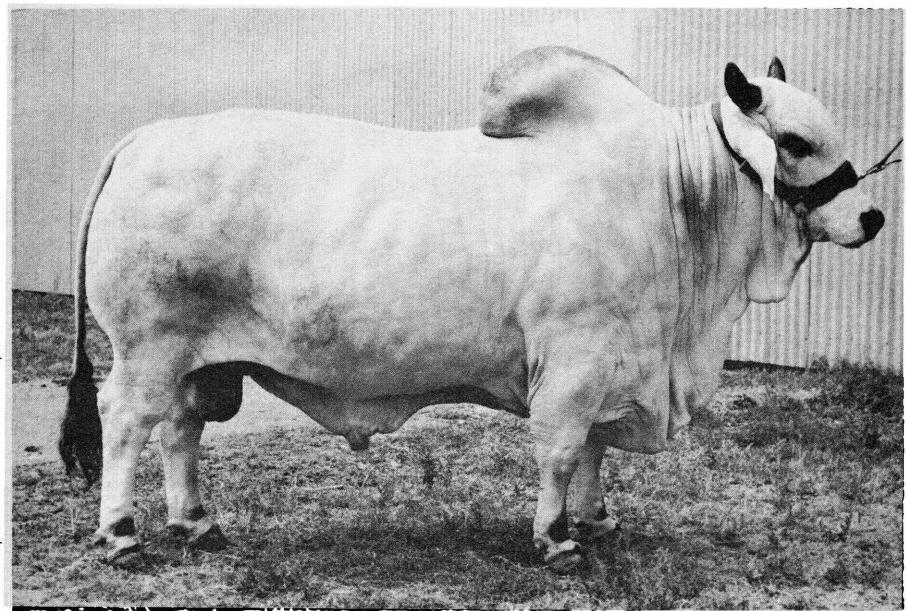
The Brahman breed was developed in the Southern United States early in the 1900's from humped cattle of India (*Bos indicus*) often referred to as Zebu.

Zebus were first imported in 1849, but the first importation of importance in the development of the Brahman breed was made by the Pierce Ranch, Pierce, Tex., and T. M. O'Connor, Victoria, Tex., in 1906. Additional importations were made in 1924, 1925, and 1946.

Cattlemen in the United States developed the Brahman by combining several Indian breeds or strains and upgrading on British breed females. This was coupled with selection for beef conformation and early maturity. The name "Brahman" was chosen by the American Brahman Breeders Association organized in 1924.

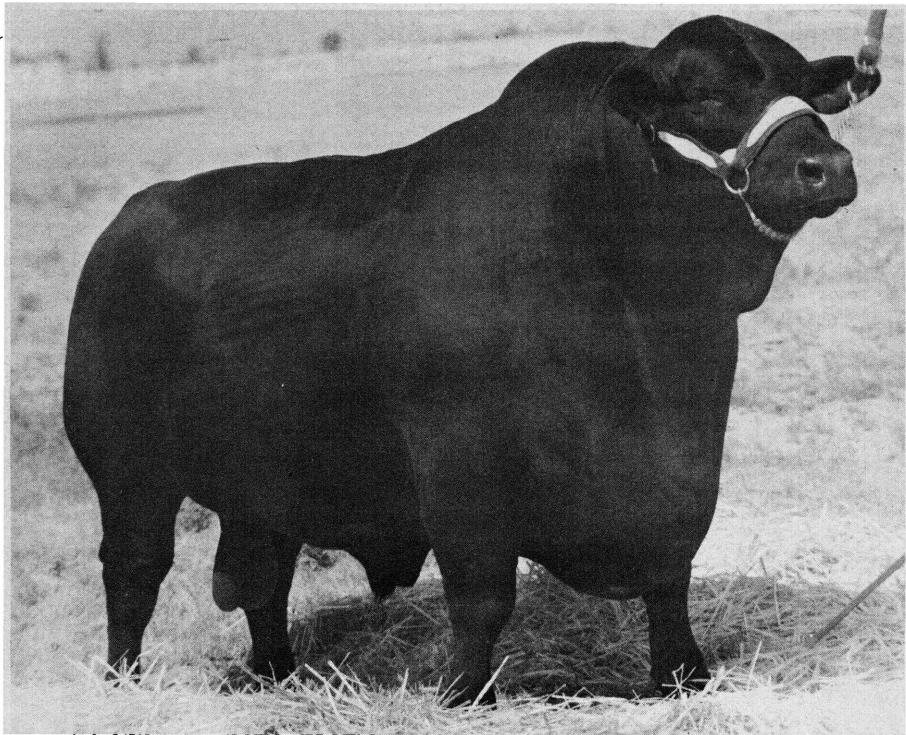
The breed is making its greatest contribution to beef production in the United States through crossing. Brahman-European crosses have long been observed to have distinct production advantages, especially under Southern conditions. They exhibit a great deal of heterosis or "hybrid vigor" and often considerably exceed both parental types in growth and reproductive rates.

Under Southern conditions, first-cross Brahman-European cows in virtually all research have weaned



Brahman.

BN-30661



BN-30443

Brangus.

substantially heavier calves than have cows of either parent breed. Brahman hybrids have performed as well in some feedlot trials during winter months as animals of the British breeds; under summer grazing and feedlot conditions, they have consistently outgained British types.

Brahmans enjoy an extensive export market. They have been shipped to 58 countries.

Brangus

Characteristics of Brangus cattle:

- Black in color.
- Polled.

The Brangus breed was developed by blending the Brahman and

Angus breeds. The cattle are a type based on foundation stock of $\frac{3}{8}$ Brahman and $\frac{5}{8}$ Angus. Animals recognized as Brangus can be produced by (1) breeding an animal having $\frac{1}{4}$ Brahman ancestry and $\frac{3}{4}$ Angus ancestry with an animal that is $\frac{1}{2}$ Brahman and $\frac{1}{2}$ Angus, (2) breeding an animal having $\frac{3}{4}$ Brahman ancestry and $\frac{1}{4}$ Angus ancestry to a purebred Angus, or (3) intermating Brangus individuals.

Brangus is a registered trade name and can be applied only to cattle registered with the International Brangus Breeders Association. Fifty-four breeders founded the association in Vinita, Okla., in 1949. Only Brangus cattle are registered

in the permanent registry of the Association.

All cattle to be registered as Brangus or enrolled as foundation stock are inspected by an Association appraisal committee.

The Brangus breed is black and polled—both inherited dominant qualities. Selection for these dominant qualities is slow, and it will likely be many generations before most individuals of the breed will be pure for both qualities.

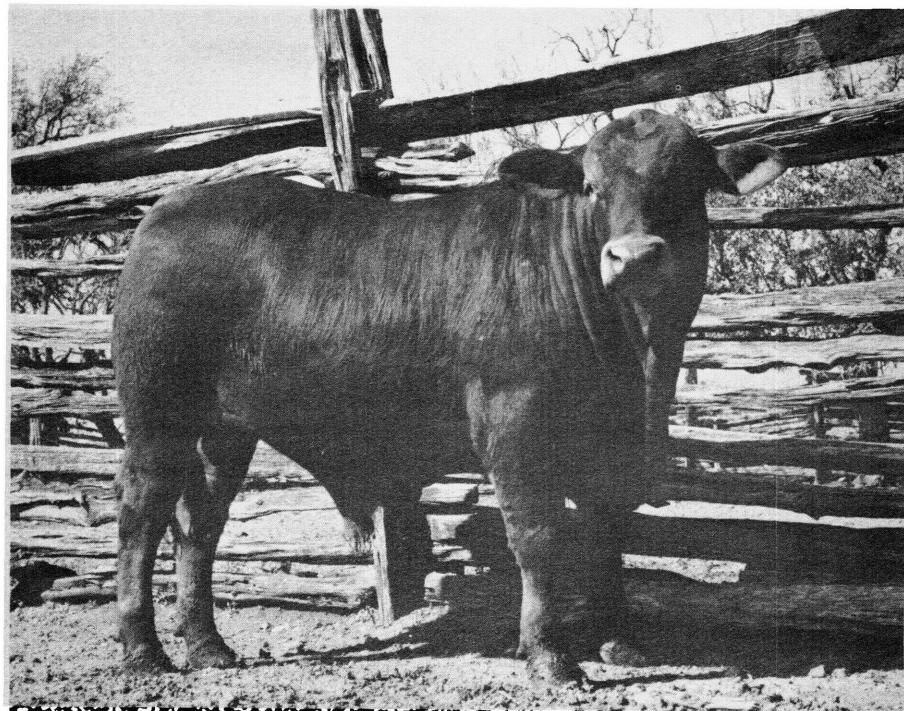
'Red Brangus

Characteristics of Red Brangus cattle:

- Red in color.
- Polled.

The Red Brangus breed is based on a combination of purebred Angus and Brahman ancestry. Although no percentages are specified, animals in general must show evidence of both parental breeds, they must be red and polled, and they must meet size and conformation requirements. Animals qualified in other respects, but appearing to have predominantly Angus or Brahman ancestry, are put in a special section known as "certified" Red Brangus. Their offspring are eligible for registration if they qualify as outlined above.

Development of the breed began in 1946 on the Paleface Ranch, Spicewood, Tex. The American Red Brangus Association was organized in 1956.



BN-30663

Red Brangus.

Charbray

Characteristics of Charbray cattle:

- White to cream in color.
- Horned.

The Charbray developed from crossing the Charolais and the Brahman breeds.

The American Charbray Breeders Association was formed in 1949. To qualify for registration, animals must have at least $\frac{1}{8}$ and not more than $\frac{1}{4}$ Brahman ancestry; the remaining $\frac{3}{4}$ or $\frac{7}{8}$ must be Charolais.

The Charbray is used both as a breed in its own right and as a step in the process of grading up to Charolais. Charbray bulls are often used for crossing with other breeds in commercial production.

Santa Gertrudis

Characteristics of Santa Gertrudis cattle:

- Cherry red in color.

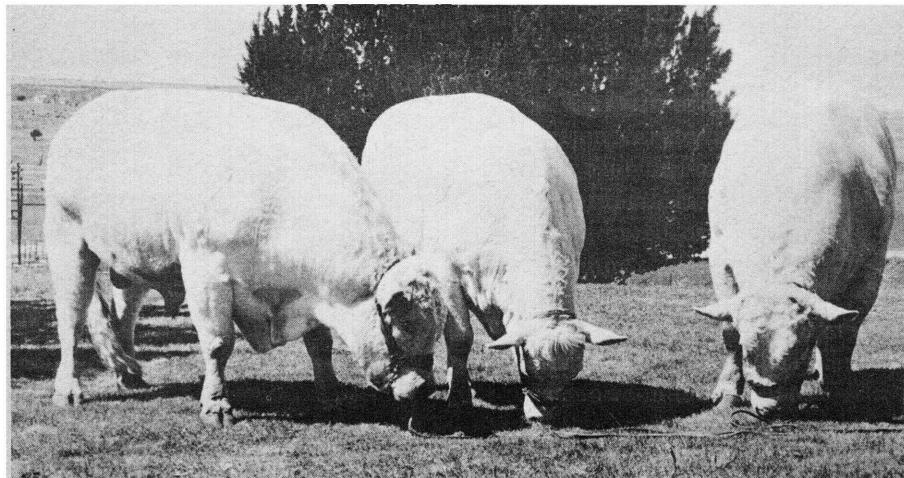
- Majority are horned, but polled individuals occur and are acceptable.

- Loose hides, with surface area increased by neck folds and sheath or navel flap.

- Hair short and straight in warm climates; long in cold climates.

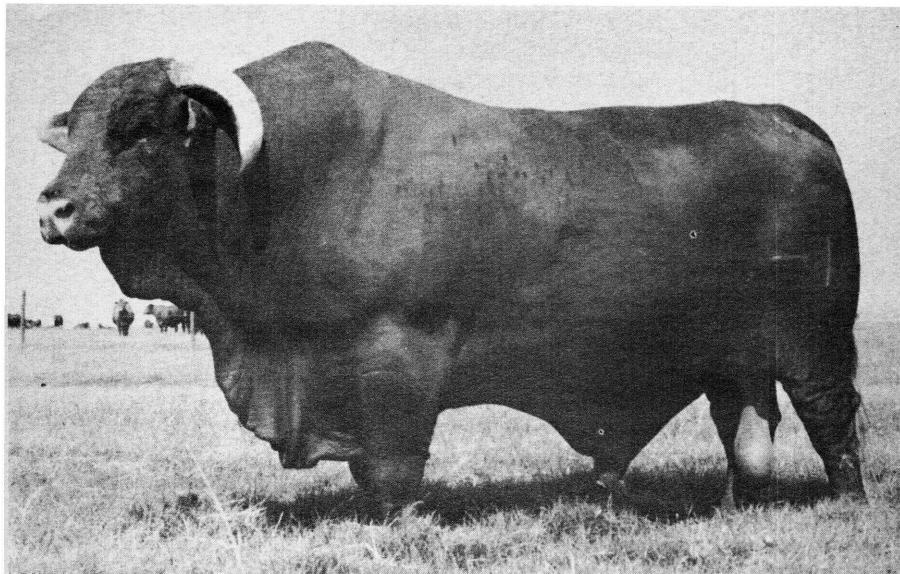
The Santa Gertrudis breed of cattle was developed by Robert J. Kleberg, Jr., president, King Ranch, in south Texas from crosses between beef type Shorthorn cows and Brahman bulls. Crossbreeding between these breeds of different species (*Bos taurus* and *Bos indicus*) started in 1910. At first, bulls with varying percentages of Brahman ancestry were crossed with cows of British breeds. These crosses showed promise, and in 1918 the formation of a new breed was initiated.

In 1920, a bull calf of $\frac{3}{8}$ Brahman and $\frac{5}{8}$ Shorthorn ancestry, with many of the desired qualities, was born and named Monkey. He proved to be an outstanding prepotent sire



Charbray.

BN-30064



BW-30065

Santa Gertrudis.

and, before his death in 1932, had produced more than 150 useful sons. He became the foundation sire of the breed and all Santa Gertrudis cattle are descended from him.

The breed has been widely distributed in the United States, particularly in the South, and has been exported to 46 other countries.

The Santa Gertrudis Breeders International was organized in 1951.

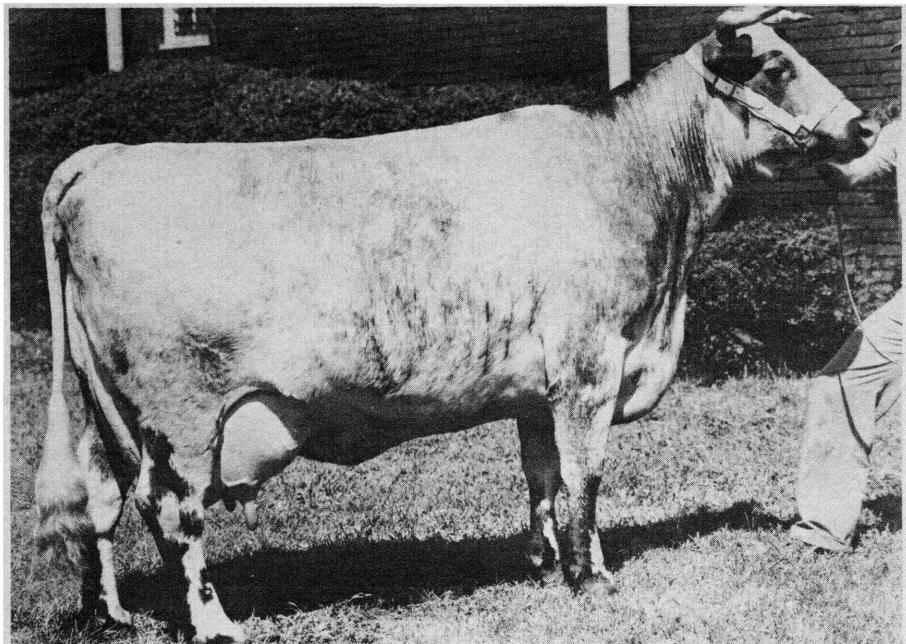
Only bulls from the King Ranch

have been sold. Thus, all Santa Gertrudis cattle owned by other breeders are the result of grading up to purebred bulls. To be certified as a purebred Santa Gertrudis, an animal must represent at least four topcrosses of Santa Gertrudis, and it must be inspected by a classifier from the breed association. Individual pedigrees are not required for certification, since multiple-sire breeding units are used in many herds.

DUAL-PURPOSE BREEDS OF CATTLE

Dual-purpose cattle are intermediate in type. This means the animals have reasonably good beef conformation, and they are also capable of producing milk and butterfat in reasonable quantities.

Some breeders stress beef qualities; others stress milk production. For this reason, the dual-purpose breeds are not as uniform in type as the strictly dairy breeds or strictly beef breeds.



BW-8000

Milking Shorthorn.

Milking Shorthorn

The Milking Shorthorn is the same as the beef type Shorthorn in color and horns, but it is more angular and less thickly fleshed. (See p. 14.)

The primary objective of the breeders of this type of Shorthorn is to develop cattle that will produce moderately large quantities of milk, and steer calves that gain rapidly and yield acceptable beef.

In selection, greater emphasis is placed on the milking qualities than on the beef-making potentials. Regardless of this emphasis, Milking Shorthorn steers are capable of yielding acceptable carcasses.

The Milking Shorthorn is primarily used under general farming

conditions. Horned Milking Shorthorn herds are more numerous than polled herds.

Red Poll

Characteristics of Red Poll cattle:

- Light red to very dark red in color. (For many years a deep, rich cherry or ruby red was officially preferred, but currently any shade of red is acceptable as long as it does not approach fawn or yellow.)

- Natural white in the tail switch.

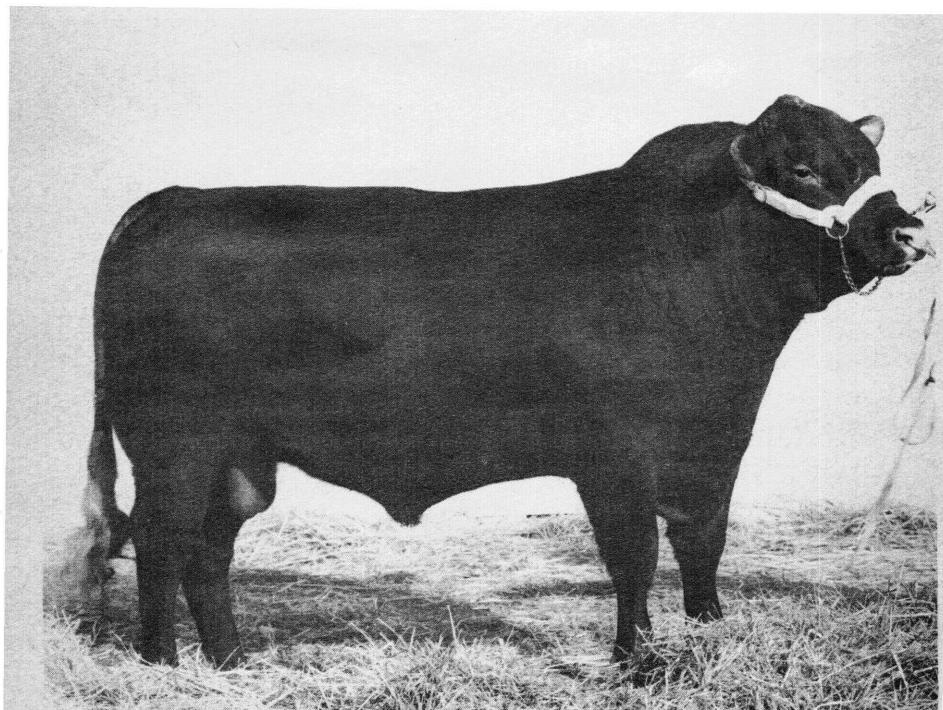
- Skin usually buff or flesh-colored. Cattle with solid black, bluish or cloudy noses are not eligible for registration.

- Natural white permissible in limited amounts on the underline.
- Polled.

The Red Poll breed originated in the eastern coastal area of England from crossing—and, eventually, nearly complete merging—of the ancient inbred stocks of the shires of Norfolk and Suffolk. This began in the early 1800's and was substantially complete by 1846, when the breed was recognized by the Royal Agricultural Society. The first registered, pedigreed Red Polls were imported to the United States in 1873 by G. F. Taber of New York. By 1900 Taber and others had imported well over 300 head. The breed spread rapidly from the eastern seaboard, through the Midwest, to the Plains and the west coast.

The Red Poll Herd Book was founded in 1873 by Henry F. Euren at the invitation and with the co-operation of the county breed societies in England. He published it in 1874 as a private enterprise. The Red Poll Herd Book, American Series, is a continuation of the original. The Red Poll Cattle Club of America was organized in 1883, 5 years before the formation of the Red Poll Cattle Society of Great Britain and Ireland.

The breed is dual-purpose in heredity and has been so documented for at least 165 years. It yields carcasses that are high in proportion of lean (loin eye muscles are large), low in outer fat covering when finished, and that have acceptable marbling in the meat.



Red Poll.

BK-80067

Some Red Poll herds have long been managed as beef cattle in typical cow-calf herds. The mothering ability of the cows is such that creep feeding is seldom necessary. With increasing specialization in the dairy business, small-farm dairy herds have been greatly reduced in recent years. This has resulted in increased emphasis on cow-calf operations in the Red Poll breed. In 1964, about 64 percent of registrations came from such cow-calf herds, maintained primarily for beef production. A strain with

moderately high milk production has also been preserved.

The Red Poll breeders organized an Advanced Registry for recording milk and butterfat production in 1908—one of the earliest programs of this kind in the American cattle industry. In 1960, a Gain Register was added for recognizing preweaning calf gain records. Then in 1963, the breeders added a Carcass Register for recording carcass merit and gain up to slaughter age—in terms of the amount of qualified carcass produced per day of age.

The purpose of this bulletin is to assist farmers and ranchers in selecting breeds and types of beef cattle from those available in the United States. Inclusion of a breed should not be interpreted as official recognition of the breed by the U.S. Department of Agriculture. Descriptions are included only for breeds having a breed association or society.

AMERICAN BEEF AND DUAL-PURPOSE CATTLE RECORD ASSOCIATIONS

Beef Cattle

American ANGUS Association 1966 Registrations: 389,141	3201 Frederick Blvd. St. Joseph, Mo. 64501
RED ANGUS Association of America 1966 Registrations: 3,361	Box 391 Balinger, Tex. 76821
American BRAHMAN Breeders Association 1966 Registrations: 15,281	4815 Gulf Freeway Houston, Tex. 77023
International BRANGUS Breeders Association 1966 Registrations: 5,323	908 Livestock Exchange Bldg. Kansas City, Mo. 64102
American RED BRANGUS Association 1966 Registrations: 350	620 Colorado Austin, Tex. 78701
BEEFMASTER Breeders Universal 1967: 9,699 cows rendered. Not strictly a registration figure.	Gunter Hotel San Antonio, Tex. 78206
American GALLOWAY Breeders Association 1965 Registrations: 2,969	Box 1424 Billings, Mont. 59103
American-International CHAROLAIS Association ¹ 1966 Registrations: 12,044	923 Lincoln Liberty Life Bldg. Houston, Tex. 77002
American DEVON Cattle Club, Inc. 1966 Registrations: 665	Agawam, Mass. 01001
American HEREFORD Association 1966 Registrations: 467,573 ²	715 Hereford Drive Kansas City, Mo. 64105
American POLLED HEREFORD Association 1966 Registrations: 165,062	4700 East 63rd Street Kansas City, Mo. 64130
SANTA GERTRUDIS Breeders International 1966 Certifications: 14,555	P.O. Box 1340 Kingsville, Tex. 78363
American SCOTCH HIGHLAND Breeders Assn. 1966 Registrations: 688	Edgemont, S. Dak. 57735
American SHORTHORN Association 1966 Registrations: 39,207 ³	8288 Haskell Street Omaha, Nebr. 68124

Continued on page 28.

¹ The former American Charbray Breeders Association merged in 1967 with the American-International Charolais Association. 1965 Charbray registrations: 2,827.

² Includes both Herefords and Polled Herefords. Polled Hereford registrations of 165,062 are also shown under the American Polled Hereford Association. They are registered by the American Hereford Association for the polled group.

³ Includes both horned and Polled Shorthorns.

Dual-Purpose Cattle

American MILKING SHORTHORN Society
1965 Registrations : 5,656³

313 S. Glenstone Avenue
Springfield, Mo. 65804

RED POLL Cattle Club of America
1965 Registrations : 1,712

3275 Holdrege Street
Lincoln, Nebr. 68503

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